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EXAMINER
BRYANT, DOUGLAS J.

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS,
WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>03 September 2009</u>.

2a) ☒ This action is **FINAL**.   2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
   closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1-16</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>1-16</u> is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on <u>24 June 2005</u> is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage
         application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail. Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

1.   Claims 1-16 are pending.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2.   Claims 1-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

   a.   The following terms lacks antecedent basis:

      i.   As per claim 10, line 3 "the current load"

   b.   The following claim language is not clearly understood and indefinite:

      ii.   As per claim 1, lines 1-2, it is not clearly indicated as to how many CPUs is in the computer system (i.e. is it more than one CPU?). Line 3, it is not clearly indicated if "for a transaction request" is the same transaction request in the preamble or is it different? if it is the same, examiner suggest "said transaction" or "the transaction". As per claim 1, line 3, it is not clearly indicated why is there a need to poll from the CPU that the transaction will not be allocated to? As per claim 1, line 6, it is not clearly indicated if allocating the transaction request is to the same CPU that the load was polled from or to any of the CPUs?

      iii.   As per claim 2, line 2, it is not clearly indicated what the relationship is between predetermined time delay and polling at defined time interval (i.e Is the

predetermined time delay the same as keep polling at "defined time intervals"
until the load in at least one of the CPUs below predetermined threshold? Or one
of the CPUs become Idle?)

iv.   As per claim 4, line 2, it is not clearly indicated how the predetermined
threshold and idle relates? What state the CPU is considered as idle? is it stopped
or no transactions assigned?

v.   As per claim 7, line 2, it is not clearly indicated if this time slice intervals
has any relationship with polling at defined time intervals in claim 2, line 2.

vi.   As per claim 8, line 1, it is not clearly indicated how many CPUs exist in
the computing system? Is there more than one?   Line 6, it is not clearly indicated
the exact job functions for the scheduling computer. Is it for executing, allocating
polling, or scheduling or all mentioned above, in respect to the received incoming
transaction request?

vii.   As per claim 10, line 3, it is not clearly indicated if "the current load" the
same load or is it different from the "system load" stated in claim 9, line 2-3.

viii.   As per claim 11, line 2, according to claim 8, line 8, the value is pre-stored
in the scheduling computer. Does that mean the original value for the threshold is
= 0 when the CPUs are idle and no transaction has been assigned to them?

ix.   As per claim 14, line 2, it has the same issue as discussed in claim 7
above.

x.   As per claim 15 and 16, it is not clearly indicated if they are a method or
medium, independent or dependent claims.

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

4.   Claims 1-3, 8-10, and 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Douglas (Douglas) US Patent 5,857,188, in view of Robsman (Robsman) US Patent

6,477,561.

5.   As per claim 1, Douglas teaches a method of scheduling a transaction request to a central

processing unit in a computing system, comprising the steps of,

        for a transaction request, polling at least one central processing unit to determine the

current load on the at least one central processing unit **(Col 8, lines 7-9; system conditions are**

retrieved and check)

        until polling determines that the load is below the predetermined threshold **(Col 8, lines**

12-18; its understood that the system conditions are periodically retrieved and checked

and once the system check passes polling stops),

        wherein said polling, allocating, and delaying steps are performed on at least one

particular machine, said at least one particular machine comprising at least one physical

computing device **(Col 8, lines 13-20; it's understood that processor on the server is a**

physical computing device on a particular machine).

6.   Douglas is silent to the teachings if the current load is below a predetermined threshold,
allocating the transaction request to one of the at least one central processing unit; *or*

        if the current load is above the predetermined threshold, delaying execution of the
transaction request for a predetermined time delay

7.   However, Robsman teaches if the current load is below a predetermined threshold,
allocating the transaction request to one of the at least one central processing unit **(Abstract
lines 2-10, 14-16; Col 5, lines 5-10; it's understood that if the load is below the threshold,
the transaction will be allocated);** *or*

        if the current load is above the predetermined threshold, delaying execution of the
transaction request for a predetermined time delay **(Col 5, lines 5-10).**

8.   It would have been obvious to one of an ordinary skill in the art at the time the invention
was made to have incorporated the teachings and concepts of Robsman into the methods of
Douglas because Robsman teaches of the step of delaying the threads to help optimize the
processor that is being over worked. By incorporating this concept, the system would improve
the total throughput for the transaction requests being processed at given times increasing the
overall efficiency and help improve the overall quality of the system.

9.   As per claim 3, Robsman teaches a method in accordance with claim 2, wherein polling

continues until the current load drops below the predetermined threshold wherein which time the

transaction request is allocated **(Col 5, lines 12-16)**

10.   As per claim 8, Douglas teaches a system for scheduling an incoming transaction to a

central processing unit in a computing system, comprising:

        a scheduling computer for scheduling a transaction, the scheduling computer, on receipt

of a transaction request, polling at least one central processing unit to obtain a value for the

central processing unit load **(Col 8, lines 7-9; Its understood that in order to determine the**

threshold value, the system load is retrieved and checked);

        a predetermined threshold stored on the scheduling computer, wherein the scheduling

computer compares the predetermined threshold to the central processing unit load, wherein the

scheduling computer **(Col 8, lines 10-12)**,

        Robsman teaches if the current load is below a predetermined threshold, allocates the

transaction request to one of the at least one central processing unit **(Abstract, Col 5, lines 5-10;**

it's understood that if the load is below the threshold, the transaction will be allocated).

        if the current load is above the predetermined threshold, delays execution of the

transaction request for a predetermined time period **(Col 5, lines 5-10)**.

11.   As per claim 9, it is rejected on the same rationale as claim 2.

12.   As per claim 10, it is rejected on the same rationale as claim 3.

13.   Claims 4-7 and 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Douglas (Douglas) US Patent 5,857,188, in view of Robsman (Robsman) US Patent 6,477,561,

and in further view of Brenner et al (Brenner) US Patent 6,658,449 B1.

14.   As per claim 4, Douglas and Robsman substantially teach the method in accordance with

claim 3. Both are silent to the teachings wherein the predetermined threshold is achieved when

the at least one of a plurality of CPU's becomes idle.

15.   However, Brenner teaches wherein the predetermined threshold is achieved when the at

least one of a plurality of CPU's becomes idle **(Col 4, lines 59-54; Col 10, lines 23-29)**.

16.   It would have been obvious to one of an ordinary skill in the art at the time the invention

was made to have incorporated the teachings of Brenner into the methods of Douglas and

Robsman because Brenner teaching of the step of searching for an idle computer would improve

the total throughput for the transaction request being processed at that given time increasing the

overall efficiency of the system.

17.   As per claim 5, Brenner teaches a method in accordance with claim 4, wherein the

predetermined time delay does not exceed 1000 milliseconds **(Col 8, lines 15-16).**

18.   However, it is noted that this is a common sense solution to the problem of perceptible

change in response time. There are a finite number of identified predictable solutions that a

person of ordinary skill has good reason to pursue as it relates to perceptible change in response

time. The issue with perceptible change in response time is that an end user cannot discern the

difference between .5 seconds, 10 seconds and 1.5 seconds. The predictable solution of 1000

milliseconds (10 seconds)is an arbitrary number and it would be obvious to try and subsequently

solve the issue of predetermine time delays as it relates to perceptible change in response time

(See MPEP 2141). It also follows that a person of ordinary skill would recognize that the proper

methods for increasing the efficiency of a transaction system, is to delay a transaction with a

predetermined time that an end user cannot determine any perceptible change in responds time;

the primary example being a predetermined time delay does not exceed 1000 milliseconds, as in

claim 5. A person of ordinary skill in the art would further recognize the well known methods of

using different load balancing techniques. Therefore, it would have been prima facie obviousness

to a person of ordinary skill in the art to modify 1.5 seconds taught by Brenner to 10 or .5

seconds.

19.   As per claim 6, it is rejected on the same rationale as claim 5.

20.   As per claim 7, Brenner teaches a method in accordance with claim 5, wherein the

predetermined time delay is in the order of one to fifteen time slice intervals **(Col 8, lines 13-15;**

predetermined time interval can be one time slice or more).

21.   As per claim 11, it is rejected on the same rationale as claim 4.

22.   As per claim 12, it is rejected on the same rationale as claim 5.

23.   As per claim 13, it is rejected on the same rationale as claim 6.

24.   As per claim 14, it is rejected on the same rationale as claim 7.

Response to Arguments

25.   Applicant's arguments with respect to claims 1-16 have been fully considered but are moot in view of the new ground(s) of rejection.

Conclusion

26.   Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

        A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this

final action.

   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to DOUGLAS BRYANT whose telephone number is (571)270-

7707. The examiner can normally be reached on M-F 8:00-5:00pm Est.

   If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, An Meng-ai can be reached on 571-272-3756. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

   Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Meng-Ai An/   /D. B./
Supervisory Patent Examiner, Art Unit 2195   Examiner, Art Unit 2195